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10/686,081	10/14/2003	Amy E. Battles	200312503-1	7263

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EXAMINER

TRAN, NHAN T

ART UNIT

PAPER NUMBER

2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/686,081	Applicant(s) BATTLES, AMY E.	
	Examiner Nhan T. Tran	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2004 and 01 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 10/1/2004 & 8/25/2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

2. Claims 2 & 22 are objected to because of the following informalities:

Claim 2 recites "the method of claim 1, further comprising the steps of:" and then recites the same step labels "a)" to "c)" that are used in claim 1. Thus, step labels "a)" to "c)" and further "d)" should be corrected with alphabetical order subsequent to step "c)" of claim 1 to avoid confusion. The Examiner suggests to change the step labels "a)", "b)", "c)", "d)" in claim 2 to -- d) --, -- e) --, -- f) --, -- g) --, respectively.

Claim 22 recites "the locations" in line 6 of claim 22, which should be corrected to read as -- locations --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 10-14, 17-24 are rejected under 35 U.S.C. 102(e) as being anticipated by White et al. (US 7,035,462 B2).

Regarding claim 22, White et al. (hereafter referred as "White") discloses a digital camera (digital camera 10 shown in Figs. 1 & 3; col. 4, line 43 – col. 5, line 15), comprising:

means (Fig. 1; image sensor 13, signal processor 16 and A/D converter 18) for producing a digital image (col. 5, lines 9-15);

memory (memory 26 or memory card 28) that stores the digital image (Fig. 1; col. 5, lines 25-29);

logic (a digital signal processor 22 in combination with camera microprocessor 36 to execute red-eye correction software programs shown in Figs. 2 & 4, col. 8, lines 54-67) that performs an adjustment (i.e., red-eye correction or eye color defects as shown in steps 113-114 and 213-214) on the digital image, the adjustment modifying pixel data (i.e., correcting red-eye pixel data in red-eye regions) in the digital image (col. 8, lines 10-67); and wherein the logic records [the] locations (pixel locations detected as red-eye regions) and original content of pixels (original pixel data in the red-eye regions) modified by the adjustment, and stores, in the memory (26 or 28), the locations and original content in an informational portion (metadata portion) of a digital image file

(JPEG image file) comprising the adjusted digital image (see col. 14, lines 1-40; col. 5, lines 25-29 and col. 8, lines 48-53).

Regarding claim 23, White also discloses that the logic further retrieves the original content of pixels modified by the adjustment from the informational portion (the metadata portion) of the digital image file, and replaces the original pixel content into the corresponding locations in the modified digital image, thereby restoring (undoing or recovering) the digital image to its unadjusted state (see col. 14, lines 6-40 and col. 6, lines 57-67 in which the original content of red-eye regions is retrieved from metadata portion of the image file when the image file is further accessed by the user at a later time to recover the digital image to its unadjusted state by restoring the original pixel data to the corresponding modified locations).

Regarding claim 24, as clearly shown in Fig. 3 of White, the digital camera comprises a user control (i.e., reject button 53) of the digital camera to instigate the restoration of the digital image to its unadjusted state (see col. 6, lines 57-67 and col. 14, lines 12-40).

Regarding claim 1, White discloses a method, comprising the steps of:

a) recording locations of pixels modified (red-eye pixel locations undergone correction are recorded in the metadata of the digital image file as discussed in claim

22) in a digital image by a digital image adjustment (a red-eye correction algorithm as discussed in claim 22 and col. 14, lines 12-23);

b) recording original pixel data present in the locations before the digital image adjustment (col. 14, lines 24-40, wherein original pixel data corresponding to the red-eye regions is also recorded in the metadata of the digital image file prior to the correction);

c) storing the locations and the original pixel data from the locations in an informational portion (the metadata portion) of a file (the digital image file, i.e., JPEG file) comprising the adjusted digital image (see col. 14, lines 1-40).

Regarding claim 2, White also discloses that the method further comprises the steps of:

a) retrieving, from the file, the adjusted digital image (col. 14, lines 1-40 and note that the adjusted digital image is retrieved from the image file when the adjusted image is further accessed by the user a later time);

b) retrieving, from the file, the locations of pixels modified by the digital image adjustment (col. 14, lines 12-40 in which the locations of pixels that were undergone red-eye correction are also retrieved from the metadata of the image file when the user accesses to the adjusted image at a later time);

c) retrieving, from the file, the original pixel data present in the locations before the digital image adjustment (col. 14, lines 12-40, wherein the original pixel data in the red-eye regions are retrieved from the metadata of the image file so that the original

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image before the adjustment is recovered from the red-eye corrected image by undoing/recovering process);

d) placing the original pixel data into the locations in the adjusted digital image (col. 14, lines 12-40, wherein the original pixel data is placed back to the locations where the pixels were corrected to recover the original image by the undoing/recovering process).

Regarding claims 3 & 4, it is clear that the method of claims 1 & 2 is performed in a digital camera (see Figs. 1 & 3 and col. 4, lines 48-50).

Regarding claims 5 & 6, White further discloses that the method as analyzed in claims 1 & 2 is performed in a scanner system (Figs. 9 & 10 and col. 12, lines 5-35, wherein the kiosk 60 includes a scanner 64).

Regarding claim 10, as disclosed by White, the digital camera (10) shown in Figs. 1 & 3 performs the two recording steps and the storing step as recited in claim 1 (note the analysis of claim 22, wherein the digital image file including the metadata and the modified image data is recorded in the memory card 28). White further discloses that the kiosk includes a removable media reader (68) for reading image file stored on a removable media including the modified image in memory card 28 of the digital camera 10 by inherency (col. 12, lines 5-25). As clearly seen from White in **col. 14, lines 1-40**, the metadata attached or associated with the digital image file of the modified image is

used to allow the user to recover the original image from the modified image when the user further accesses the modified image file at a later time at the kiosk for recovering process to the original image by undoing previous edits regardless where the image was previously edited, i.e., by the digital camera or the kiosk. By White's disclosure in col. 14, lines 1-40, the claim limitations "the three retrieving steps and the placing steps are performed in a device other than the digital camera" are also encompassed by the kiosk by accessing and retrieving the metadata and the modified image file stored in the memory card when the memory card is inserted into the kiosk for recovering the original image using the metadata stored in the image file from previous edits by the digital camera.

Regarding claim 11, White further discloses the other device than the digital camera is a computer (see Fig. 10, wherein the kiosk 60 is also a computer since it includes control computer 67).

Regarding claim 12, also disclosed by White, fewer than all of pixels in the digital image have been modified by the digital image adjustment (see Fig. 3; col. 10, lines 33-40 and note that only pixels in the red-eye region are corrected).

Regarding claim 13, the disclosure of White in col. 10, lines 33-40 also anticipates that fewer than 5 percent of the pixels in the digital image have been modified in the digital image adjustment. Note that the number pixels in corrected in the

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red-eye region are varied from image to image, and *not all red-eyes are corrected because the user can manually select which one for correction as disclosed in col. 7, lines 1-25*. Thus, “fewer than 5 percent of the pixels in the image have been modified in the digital image adjustment” is also encompassed depending on the user’s need. In another case, the claim limitations are also encompassed when the captured image is a landscape image containing only one person in an open space. Thus, the pair of red eyes of the person is very small relative to total size of the image (i.e., total size = $1536 \times 1024 = 1.5$ Mpixels as disclosed in col. 4, lines 61-63). It is clearly seen in this case that the corrected pixels for eye color defects are less than 5 percent of the total pixels of the image in such a condition (see also Fig. 3 for an example).

Regarding claim 14, as clearly disclosed by White that the digital image adjustment is red-eye removal (col. 13, lines 61-62).

Regarding claim 17, White discloses the digital image adjustment being performed automatically by a digital imaging system (col. 8, lines 17-19).

Regarding claims 18-21, all limitations of these claims are also met by the analyses of claims 3-6, respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US 7,035,462 B2) in view of Parulski et al. (US 6,567,119 B1).

Regarding claim 9, White discloses the informational portion (the metadata) is attached or associated with the digital image file such as a JPEG file (col. 14, lines 1-29). White is silent about that the informational portion of the file is an APP segment in a JPEG file.

However, Parulski et al. (hereafter referred as "Parulski") teaches a JPEG file (Fig. 6) that includes an APP segment (APP7 segment) for storing all information and data including metadata related to image modification and processing, i.e., red-eye removal, rotate, crop, etc. similar to extension property set of FlashPix file so that the original image can be at a later time if necessary (see Parulski, col. 8, lines 45-62 and col. 6, lines 1-32). Storing the metadata in the APP segment of the JPEG file provides an advantage in that only applications familiar to the data inside the APP segment can read and understand the meaning of the metadata while causing many other applications to ignore the APP segment as suggested by Parulski in col. 8, lines 26-33, thereby enhancing security to the original image by preventing unfamiliar applications

(used by other users) to access to the APP segment for restoring the original image data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the metadata in an APP segment in a JPEG file so that the security to the original image would be enhanced by preventing unfamiliar applications (used by other users) to access to the APP segment for restoring the original data.

5. Claims 7 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US 7,035,462 B2) in view of Mizukami et al. (US 2004/0041920).

Regarding claim 7, Although White teaches that the informational portion is attached or associated with the image file such as a JPEG file (col. 14, lines 1-29), White does not explicitly teach that the information portion of the file is a comment segment of a JPEG file.

As taught by Mizukami et al. (hereafter referred as "Mizukami"), it is desirable to store information related to modified image in a tag of a JPEG or TIFF file, such as maker-note or user-note tag (comment segment). See Mizukami, paragraph [0210].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the method and apparatus of White to allow users to store the informational portion of the file in a comment segment of a JPEG file as it is desirable by some users as suggested by Mizukami above.

Regarding claim 8, Although White teaches that the informational portion is attached or associated with the image file such as a JPEG file (col. 14, lines 1-29), White does not explicitly teach that the information portion of the file is a tag data of a TIFF file.

Such lack of teaching is compensated by Mizukami. As taught by Mizukami, it is desirable to store information related to modified image in a tag of a JPEG or TIFF file. See Mizukami, paragraph [0210].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alternatively modify the method and apparatus of White to store the informational portion of the file in the tag of a TIFF file as an obvious variant over storing the informational portion in the tag of a JPEG file depending on the need of the users for JPEG or TIFF format as suggested by Mizukami above.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US 7,035,462 B2).

Regarding claim 15, White teaches that the digital adjustment is red-eye removal as discussed in claim 14 above. White further suggests that those skilled in the art will recognize that the apparatus and method in accordance with White's invention can be applied to other image artifacts, including removal of **scratches (high-frequency contents)**, dust, wrinkles, etc. (see White, col. 4, lines 36-42). Note that the scratches

are dispersed high-frequency defects on a scanned image as defined by the Applicant's specification, page 20, lines 23-25.

Therefore, it would have been obvious to one of ordinary skill in the art at to recognize and configure the method and apparatus of White to apply for removing dispersed high-frequency content (i.e., scratches) on the image suggested by White so as to further improve the image quality.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (US 7,035,462 B2) in view of Gaglione et al. (US 6,069,637).

Regarding claim 16, White teaches removal of red-eye as discussed in claim 14 but does not teach that the digital adjustment is the removal of date/time imprint.

However, Gaglione et al. (hereafter referred as "Gaglione") teaches an imaging processing apparatus that modifies a digital image for improvement by not only removing red-eye but also to remove date on the image (see Gaglione, col. 10, lines 15-17).


Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and apparatus in White to include date removal in addition to red-eye removal as suggested by Gaglione so that the image would be enhanced for mounting as an art frame without a distracted date imprinted thereon.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



NHAN T. TRAN
Patent Examiner